AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for deciding tilt angles of antennas having directivity in a vertical plane, which are provided in a plurality of radio base stations constituting a radio communication system, said method comprising:

a first step of selecting an antenna whose tilt angle is to be reduced;

a second step of calculating a deterioration rate of the ~~entire~~ system more than once, by changing the tilt angle, at the time when a tilt angle of the antenna selected in the first step is reduced;

a third step of selecting an antenna whose tilt angle is to be increased;

a fourth step of calculating a deterioration rate of the ~~entire~~ system more than once, by changing the tilt angle, at the time when a tilt angle of the antenna selected in the third step is increased; [[and]]

a fifth step of outputting the tilt angle corresponding to the smallest deterioration rate in the deterioration rate of the ~~entire~~ system calculated in the second step and the deterioration rate of the ~~entire~~ system calculated in the fourth step

a sixth step being performed after the first step and the second step, wherein it is determined whether processes of the first step and the second step are to be repeated;

a seventh step being performed after the third step and the fourth step, wherein it is determined whether processes of the third step and the fourth step are to be repeated; and

wherein the deterioration rate is a ratio of the points where reception power or quality is lower than a predetermined value within specified coverage.

2. (Original) A method for deciding tilt angles of antennas of a radio communication system according to claim 1, further comprising:

~~a sixth step being performed after the first step and the second step, wherein it is determined whether processes of the first step and the second step are to be repeated;~~

~~a seventh step being performed after the third step and the fourth step, wherein it is determined whether processes of the third step and the fourth step are to be repeated; and~~

an eighth step being performed after the first step to the seventh step, wherein it is determined whether processes of the first step to the seventh step are to be repeated.

3. (Original) A method of deciding tilt angles of antennas of a radio communication system according to claim 2, further comprising;

a ninth step being performed right before the first step wherein a step angle being used for changing a tilt angle in the second step is changed in accordance with the accumulated number of times of repetitions of the processes if it is determined in the eighth step that the processes of the first step to the seventh step are to be repeated.

4. (Previously Presented) A method of deciding tilt angles of antennas of a radio communication system according to claim 2, further comprising;

a tenth step being performed right before the third step wherein a step angle being used for changing a tilt angle in the fourth step is changed in accordance with the accumulated number of times of repetitions of the processes if it is determined in the eights step that the processes of the first step to the seventh step are to be repeated.

5. (Previously Presented) A method of deciding tilt angles of antennas of a radio communication system according to claim [[1]] 2,

wherein one of or both of the first step of selecting an antenna for reducing the tilt angle and the third step of selecting an antenna for increasing the tilt angle

selects or select antennas based on deterioration rates of coverage of the antennas, respectively.

6. (Currently Amended) An apparatus for deciding tilt angles of antennas having directivity in a vertical plane, which are provided in a plurality of radio base stations constituting a radio communication system, said apparatus comprising:

first antenna selecting means for selecting an antenna whose tilt angle is to be reduced;

second antenna selecting means for selecting an antenna whose tilt angle is to be reduced;

deterioration rate calculating means for calculating a deterioration rate of the ~~entire~~ system after a tilt angle of the antenna selected by the first antenna selecting means or the second antenna selecting means is changed, said deterioration rate being calculated at least once after a tilt angle is changed;

data storage means for storing the deterioration rate calculated by the deterioration rate calculating means and tilt angles associated therewith; and

means for outputting tilt angles realizing the smallest deterioration rate of the ~~entire~~ system from data of the tilt angles and deterioration rates stored in the data storage means wherein the deterioration rate is a ratio of the points where reception power or quality is lower than a predetermined value within specified coverage.

7. (Original) An apparatus for deciding tilt angles of antennas of a radio communication system according to claim 6,

wherein one of or both of the first antenna selecting means and the second antenna selecting means select antennas based on deterioration rates of coverage of the antennas.

8. (Previously Presented) An apparatus for deciding tilt angles of antennas of a radio communication system according to claim 6, further comprising:

process switching means for outputting information on switching among an operation by the first antenna selecting means, an operation by the second antenna selecting means, and termination of processes;

a switching frequency counter for counting the information on switching outputted from the process switching means; and

means for setting tilt angle change parameters which changes a degree of tilt angle change for an antenna selected by the first antenna selecting means or the second antenna selecting means once frequency of switching counted by the switching frequency counter is a predetermined number or larger.

9. (Previously Presented) A method of deciding tilt angles of antennas of a radio communication system according to claim 3, further comprising;

a tenth step being performed right before the third step wherein a step angle being used for changing a tilt angle in the fourth step is changed in accordance with the accumulated number of times of repetitions of the processes if it is determined in the eights step that the processes of the first step to the seventh step are to be repeated.

10. (Previously Presented) A method of deciding tilt angles of antennas of a radio communication system according to claim 2,

wherein one of or both of the first step of selecting an antenna for reducing the tilt angle and the third step of selecting an antenna for increasing the tilt angle selects or select antennas based on deterioration rates of coverage of the antennas, respectively.

11. (Previously Presented) A method of deciding tilt angles of antennas of a radio communication system according to claim 3,

wherein one of or both of the first step of selecting an antenna for reducing the tilt angle and the third step of selecting an antenna for increasing the tilt angle

selects or select antennas based on deterioration rates of coverage of the antennas, respectively.

12. (Previously Presented) A method of deciding tilt angles of antennas of a radio communication system according to claim 4,

wherein one of or both of the first step of selecting an antenna for reducing the tilt angle and the third step of selecting an antenna for increasing the tilt angle selects or select antennas based on deterioration rates of coverage of the antennas, respectively.

13. (Previously Presented) A method of deciding tilt angles of antennas of a radio communication system according to claim 9,

wherein one of or both of the first step of selecting an antenna for reducing the tilt angle and the third step of selecting an antenna for increasing the tilt angle selects or select antennas based on deterioration rates of coverage of the antennas, respectively.

14. (Previously Presented) An apparatus for deciding tilt angles of antennas of a radio communication system according to claim 7, further comprising:

process switching means for outputting information on switching among an operation by the first antenna selecting means, an operation by the second antenna selecting means, and termination of processes;

a switching frequency counter for counting the information on switching outputted from the process switching means; and

means for setting tilt angle change parameters which changes a degree of tilt angle change for an antenna selected by the first antenna selecting means or the second antenna selecting means once frequency of switching counted by the switching frequency counter is a predetermined number or larger.